

**AMENDMENTS TO THE CLAIMS**

The following will replace all previous listings of claims in this application.

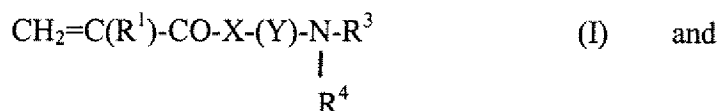
1. (Original) A personal care composition for treatment of hair or skin comprising:

(i) a cosmetically acceptable medium comprising at least one cosmetically acceptable additive selected from the group consisting of conditioning agents, protecting agents, fixing agents, oxidizing agents, reducing agents and dyes, and

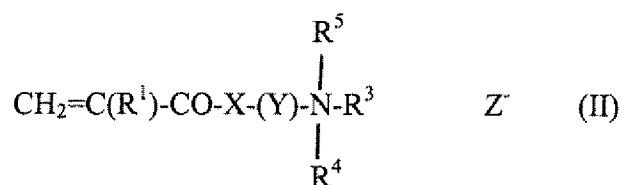
(ii) a cationic polymer derived from:

(a) at least one vinyl lactam or alkylvinyl lactam monomer;

(b) at least one monomer having the structure



(c) at least one quaternized monomer having the structure



wherein X is an oxygen atom or an NR<sup>6</sup> radical;

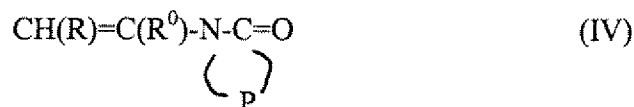
R<sup>1</sup> and R<sup>6</sup> are each independently H or C<sub>1</sub>-C<sub>5</sub> alkyl;

R<sup>3</sup>, R<sup>4</sup> and R<sup>5</sup> are each independently H or C<sub>1</sub>-C<sub>30</sub> alkyl;

Y is an alkylene radical having from 2 to 16 carbon atoms and

Z is an anion of an organic or mineral acid.

2. (Original) The composition of Claim 1 wherein said vinyl lactam or alkylvinyl lactam monomer is a compound of structure (IV):



in which:

P is C<sub>3</sub> to C<sub>6</sub> alkylene optionally substituted with lower alkyl,

R and R<sup>0</sup> are independently H or a C<sub>1</sub>-C<sub>5</sub> alkyl,

provided that at least one of R and R<sup>0</sup> is H.

3. (Original) The composition of Claim 2 wherein said vinyl lactam monomer is vinylpyrrolidone.

4. (Original) The composition of Claim 1 wherein R<sup>3</sup>, R<sup>4</sup>, and R<sup>5</sup> are independently H or C<sub>1</sub>-C<sub>30</sub> linear or branched alkyl.

5. (Original) The composition of Claim 1 wherein said anion Z is selected from the group consisting of halide ions, phosphate ions, methosulfate ion and tosylate ion.

6. (Original) The composition of Claim 1 wherein said cationic polymer further comprises one or more cationic or nonionic monomers.

7. (Original) The composition of Claim 1 wherein said cationic polymer contains, by weight, 40 to 95% monomer (a), 0.25 to 50% monomer (b), and 0.1 to 55% monomer (c).

8. (Original) The composition of Claim 1 wherein said cationic polymer is a terpolymer selected from the group consisting of vinylpyrrolidone/dimethylaminopropylmethacrylamide/

dodecyldimethylmethacrylamidopropylammonium tosylate terpolymers,  
vinylpyrrolidone/dimethylaminopropylmethacrylamide/  
cocoyldimethylmethacrylamidopropylammonium tosylate terpolymers,  
vinylpyrrolidone/dimethylaminopropylmethacrylamide/lauryldimethyl-  
methacrylamidopropylammonium tosylate or chloride terpolymers.

9. (Original) The composition of Claim 1 wherein said cationic polymer has a weight average molecular weight between 200,000 and 2,000,000.
10. (Original) The composition of Claim 1 wherein said cationic polymer is present in an amount from about 0.01 to 10 wt% of the total weight of the composition.
11. (Original) The composition of Claim 10 wherein said cationic terpolymer is present in an amount from 0.1 to 5 wt% of the total weight of the composition.
12. (Original) The composition of Claim 1 wherein said additive is a conditioning agent.
13. (Original) The composition of Claim 12 wherein said conditioning agent is selected from the group consisting of synthesis oils, mineral oils, vegetable oils, fluoridated or perfluoridated oils, natural or synthetic waxes, silicones, cationic polymers other than the cationic polymer defined in claim 1, proteins and hydrolyzed proteins, ceramide type compounds, cationic surfactants, fatty amines, fatty acids and derivatives thereof, and mixtures of said conditioning agents.
14. (Original) The composition of Claim 13 wherein said conditioning agent is a cationic polymer is selected from the group consisting of polymers containing recurring units consisting of primary, secondary, tertiary and/or quaternary amines, quaternary derivatives of

cellulose ether, cationic cyclopolymers, cationic polysaccharides, quaternary polymers of vinyl pyrrolidone and vinyl imidazole, and mixtures thereof.

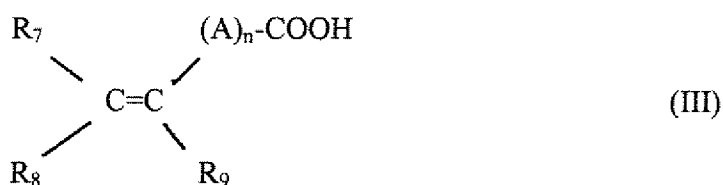
15. (Original) The composition of Claim 13 wherein said conditioning agent is a silicone selected from the group consisting of polyalkyl siloxanes, polyaryl siloxanes, polyalkyl aryl siloxanes, silicone gums, resins, and organo-modified silicones.

16. (Original) The composition of Claim 1 wherein said additive is a protecting agent.

17. (Original) The composition of Claim 16 wherein said protecting agent is selected from the group consisting of hydrosoluble, liposoluble and water-insoluble UV filters, antiradical agents, antioxidants, vitamins and provitamins.

18. (Original) The composition of Claim 1 wherein said additive is a fixing agent.

19. (Original) The composition of Claim 18 wherein said fixing agent is an anionic polymer chosen from polymers containing carboxylic units derived from unsaturated carboxylic mono- or diacids of the formula:



in which n is a whole number from 0 to 10, A<sub>1</sub> denotes a methylene group, optionally bonded to the carbon atom of the unsaturated group or to a neighboring methylene group when n is greater than 1 by means of a heteroatom like oxygen or sulfur, R<sub>7</sub> denotes a hydrogen atom, a phenyl or benzyl group, R<sub>8</sub> denotes a hydrogen atom, a lower alkyl or carboxyl group, R<sub>9</sub> denotes a hydrogen atom, a lower alkyl group, a -CH<sub>2</sub>-COOH, phenyl or benzyl group and polymers

containing units derived from sulfenic acid like vinylsulfonic, styrenesulfonic, acrylamidoalkylsulfonic units.

20. (Original) The composition of Claim 18 wherein said fixing agent is an amphoteric polymer containing units derived from:

- a. at least one monomer selected from acrylamides or methacrylamides substituted on the nitrogen with an alkyl radical,
- b. at least one acid monomer containing one or more reactive carboxyl groups, and
- c. at least one basic monomer, selected from esters with primary, second, tertiary and quaternary amino substituents of acrylic and methacrylic acids and the product of quaternization of dimethylaminoethyl methacrylate with dimethyl or diethyl sulfate.

21. (Original) The composition of Claim 18 wherein said fixing agent is a nonionic polymer selected from polyalkyloxazolines; vinyl acetate homopolymers; vinyl acetate and acrylic ester copolymers; vinyl acetate and ethylene copolymers; vinyl acetate and maleic ester copolymers; polyethylene and maleic anhydride copolymers; homopolymers of alkyl acrylates; homopolymers of alkyl methacrylates; copolymers of acrylic esters; copolymers of alkyl acrylates and alkyl methacrylates; copolymers of acrylonitrile and a nonionic monomer chosen from among butadiene and alkyl (meth)acrylates; copolymers of alkyl acrylate and urethane; and polyamides.

22. (Original) The composition of Claim 18 wherein said fixing agent is a functionalized or unfunctionalized silicone or non-silicone polyurethane.

23. (Original) The composition of Claim 18 wherein said fixing agent is a polymer of the grafted silicone type containing a polysiloxane portion and a portion consisting of

a nonsilicone organic chain, with one of the two portions forming the main chain of the polymer, and with the other being grafted onto said main chain.

24. (Original) The composition of Claim 18 wherein said fixing agent is present in the composition in a relative weight concentration between 0.1 and 10%.

25. (Original) The composition of Claim 1 wherein said additive is an oxidizing agent.

26. (Original) The composition of Claim 25 wherein said oxidizing agent is selected from the group consisting of hydrogen peroxide, urea peroxide, alkali metal bromates or ferricyanides, persalts, and redox enzymes, optionally with their respective donor or cofactor.

27. (Original) The composition of Claim 26 wherein said oxidizing agent is hydrogen peroxide.

28. (Original) The composition of Claim 27 characterized in that said composition is a solution of oxygenated water whose titer varies from 1 to 40 volumes.

29. (Original) The composition of Claim 28 characterized in that said composition has a pH greater than 7.

30. (Original) The composition of Claim 1 wherein said additive is a reducing agent.

31. (Original) The composition of Claim 30 wherein said reducing agent is selected from the group consisting of thiols, thioglycolic acid, thiolactic acid and cysteamine.

32. (Original) The composition of Claim 1 wherein said additive is a dye.

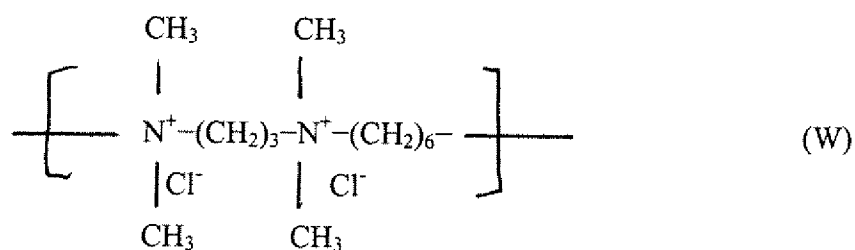
33. (Original) The composition of Claim 32 wherein said dye is selected from the group consisting of neutral acid or cationic nitrobenzene dyes; neutral acid or cationic azo dyes;

quinone dyes; neutral, acid or cationic anthraquinone dyes; azine dyes; triarylmethane dyes; indoamine dyes and natural dyes.

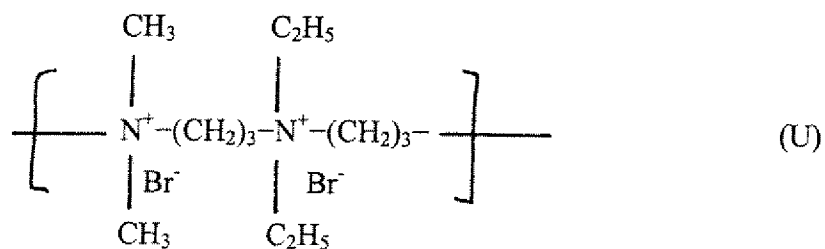
34. (Original) The composition of Claim 32 wherein said dye is present in an amount from 0.001 to 20 wt% of the total weight of the composition.

35. (Original) The composition of Claim 1 further comprising at least one amphsteric polymer or cationic polymer different from the cationic poly(vinylactam) defined in Claim 1.

36. (Original) The composition of Claim 35 wherein said cationic polymer is a poly(quaternary ammonium) consisting of recurrent units corresponding to the following formula (W):



37. (Original) The composition of Claim 35 wherein said cationic polymer is a poly(quaternary ammonium) consisting of recurrent units corresponding to the following formula (U):



38. (Original) The composition of Claim 35 wherein said amphoteric polymer is a copolymer containing at least one acrylic acid and a dimethyldiallyl ammonium salt as a monomer.

39. (Original) The composition of Claim 35 wherein said cationic or amphoteric polymer or polymers are present in an amount of 0.01 to 10 wt% of the total weight of the composition.

40. (Original) The composition of Claim 1 further comprising at least one surfactant chosen from anionic, cationic, nonionic or amphoteric surfactants.

41. (Original) The composition of Claim 40 wherein said surfactant is present in an amount of 0.01 to 40 wt% of the total weight of the composition.

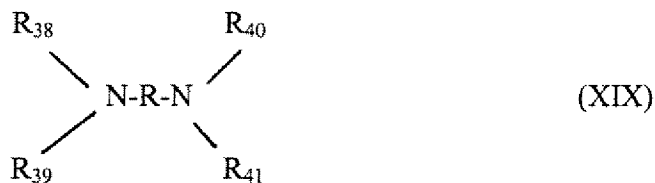
42. (Original) The composition of Claim 1 characterized in that said composition has a pH from 2 to 12.

43. (Original) The composition of Claim 1 wherein said cosmetically acceptable medium is formed from water or one or more cosmetically acceptable solvents.

44. (Original) The composition of Claim 1 further comprising at least one additive selected from the group consisting of cleansing agents, anionic, cationic, nonionic, or amphoteric surfactants, perfumes, stabilizers, pH adjusters, preservatives, colorants, bleaching agents, highlighting agents sequestrants and any other additive conventionally used in cosmetic compositions.

45. (Original) The composition of Claim 1 further comprising at least one alkalizing or acidifying agent in an amount from 0.01 to 30 wt% of the total weight of the composition.

46. (Original) The composition of Claim 45 wherein said alkalizing agent is selected from the group consisting of ammonia, alkali carbonates, alkanolamines, mono-, di- and triethanolamines and derivatives thereof, hydroxyalkylamines, ethoxylated and/or propoxylated ethylenediamines, sodium or potassium hydroxides and compounds of the following formula (XIX):



in which R is a propylene residue optionally substituted with an hydroxyl group or a C<sub>1</sub>-C<sub>4</sub> alkyl radical; R<sub>38</sub>, R<sub>39</sub>, R<sub>40</sub> and R<sub>41</sub>, identical or different, represent a hydrogen atom, a C<sub>1</sub>-C<sub>4</sub> alkyl radical or a C<sub>1</sub>-C<sub>4</sub> hydroxyalkyl radical.

47. (Original) The composition of Claim 45 wherein said acidifying agent is selected from mineral or organic acids, carboxylic and sulfonic acids.

48. (Original) The composition of Claim 1 wherein said composition is anhydrous and intended for bleaching or permanent wave waving of human keratin fibers.

49. (Canceled)